

WHAT IS CLAIMED IS:

1. A substantially pure polypeptide comprising
a fully human or humanized chimpanzee monoclonal antibody that binds or
neutralizes dengue type 1, 2, 3, and/or 4 virus,

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or comprising

a monoclonal antibody that binds the antigen to which monoclonal antibody
5H2 (ATCC Accession No. PTA-5662) binds,

or comprising

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a monoclonal antibody that binds the antigen to which monoclonal antibody
1A5 (ATCC Accession No. PTA-6265) binds.

2. The substantially pure polypeptide of Claim 1 wherein said antibody
fragment comprises an Fd fragment.

3. The substantially pure polypeptide of Claim 1 wherein said antibody
fragment comprises an Fab fragment.

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4. The substantially pure polypeptide of Claim 1 wherein said antibody
includes a heavy chain CDR3 region having the amino acid sequence of SEQ ID NO: 7, 23,
39, 55, 71, 87, 103, 119, 135, 151, 167, or 183.

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5. The substantially pure polypeptide of Claim 4 wherein said antibody
includes a heavy chain CDR2 region having the amino acid sequence of SEQ ID NO: 5,
(when heavy chain CDR3 region is SEQ ID NO: 7), 21 (when heavy chain CDR3 region is
SEQ ID NO: 23), 37 (when heavy chain CDR3 region is SEQ ID NO: 39), 53 (when heavy
chain CDR3 region is SEQ ID NO: 55), 69 (when heavy chain CDR3 region is SEQ ID
NO: 71), 85 (when heavy chain CDR3 region is SEQ ID NO: 87), 101 (when heavy chain
CDR3 region is SEQ ID NO: 103), 117 (when heavy chain CDR3 region is SEQ ID NO:
119), 133 (when heavy chain CDR3 region is SEQ ID NO: 135), 149 (when heavy chain
CDR3 region is SEQ ID NO: 151), 165 (when heavy chain CDR3 region is SEQ ID NO:
167), or 181 (when heavy chain CDR3 region is SEQ ID NO: 183).

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6. The substantially pure polypeptide of Claim 5 wherein said antibody
includes a heavy chain CDR1 region having the amino acid sequence of SEQ ID NO: 3
(when heavy chain CDR3 region is SEQ ID NO: 7), 19 (when heavy chain CDR3 region is
SEQ ID NO: 23), 35 (when heavy chain CDR3 region is SEQ ID NO: 39), 51 (when heavy
chain CDR3 region is SEQ ID NO: 55), 67 (when heavy chain CDR3 region is SEQ ID
NO: 71), 83 (when heavy chain CDR3 region is SEQ ID NO: 87), 99 (when heavy chain

CDR3 region is SEQ ID NO: 103), 115 (when heavy chain CDR3 region is SEQ ID NO: 119), 131 (when heavy chain CDR3 region is SEQ ID NO: 135), 147 (when heavy chain CDR3 region is SEQ ID NO: 151), 163 (when heavy chain CDR3 region is SEQ ID NO: 167), or 179 (when heavy chain CDR3 region is SEQ ID NO: 183).

5 7. The substantially pure polypeptide of Claim 4 wherein said antibody includes a heavy chain Fd region including the amino acid sequence of SEQ ID NO: 1 (when heavy chain CDR3 region is SEQ ID NO: 7), 17 (when heavy chain CDR3 region is SEQ ID NO: 23), 33 (when heavy chain CDR3 region is SEQ ID NO: 39), 49 (when heavy chain CDR3 region is SEQ ID NO: 55), 65 (when heavy chain CDR3 region is SEQ ID NO: 71), 81 (when heavy chain CDR3 region is SEQ ID NO: 87), 97 (when heavy chain CDR3 region is SEQ ID NO: 103), 113 (when heavy chain CDR3 region is SEQ ID NO: 119), 129 (when heavy chain CDR3 region is SEQ ID NO: 135), 145 (when heavy chain CDR3 region is SEQ ID NO: 151), 161 (when heavy chain CDR3 region is SEQ ID NO: 167), or 177 (when heavy chain CDR3 region is SEQ ID NO: 183).

15 8. The substantially pure polypeptide of Claim 4 wherein said antibody includes a light chain CDR3 region having the amino acid sequence of SEQ ID NO: 15 (when heavy chain CDR3 region is SEQ ID NO: 7), 31 (when heavy chain CDR3 region is SEQ ID NO: 23), 47 (when heavy chain CDR3 region is SEQ ID NO: 39), 63 (when heavy chain CDR3 region is SEQ ID NO: 55), 79 (when heavy chain CDR3 region is SEQ ID NO: 71), 95 (when heavy chain CDR3 region is SEQ ID NO: 87), 111 (when heavy chain CDR3 region is SEQ ID NO: 103), 127 (when heavy chain CDR3 region is SEQ ID NO: 119), 143 (when heavy chain CDR3 region is SEQ ID NO: 135), 159 (when heavy chain CDR3 region is SEQ ID NO: 151), 175 (when heavy chain CDR3 region is SEQ ID NO: 167), or 191 (when heavy chain CDR3 region is SEQ ID NO: 183).

25 9. The substantially pure polypeptide of Claim 8 wherein said antibody includes a light chain CDR2 region having the amino acid sequence of SEQ ID NO: 13 (when heavy chain CDR3 region is SEQ ID NO: 7), 29 (when heavy chain CDR3 region is SEQ ID NO: 23), 45 (when heavy chain CDR3 region is SEQ ID NO: 39), 61 (when heavy chain CDR3 region is SEQ ID NO: 55), 77 (when heavy chain CDR3 region is SEQ ID NO: 71), 93 (when heavy chain CDR3 region is SEQ ID NO: 87), 109 (when heavy chain CDR3 region is SEQ ID NO: 103), 125 (when heavy chain CDR3 region is SEQ ID NO: 119), 141 (when heavy chain CDR3 region is SEQ ID NO: 135), 157 (when heavy chain

CDR3 region is SEQ ID NO: 151), 173 (when heavy chain CDR3 region is SEQ ID NO: 167), or 189 (when heavy chain CDR3 region is SEQ ID NO: 183).

10. The substantially pure polypeptide of Claim 9 wherein said antibody includes a light chain CDR1 region having the amino acid sequence of SEQ ID NO: 11 5 (when heavy chain CDR3 region is SEQ ID NO: 7), 27 (when heavy chain CDR3 region is SEQ ID NO: 23), 43 (when heavy chain CDR3 region is SEQ ID NO: 39), 59 (when heavy chain CDR3 region is SEQ ID NO: 55), 75 (when heavy chain CDR3 region is SEQ ID NO: 71), 91 (when heavy chain CDR3 region is SEQ ID NO: 87), 107 (when heavy chain CDR3 region is SEQ ID NO: 103), 123 (when heavy chain CDR3 region is SEQ ID NO: 10 119), 139 (when heavy chain CDR3 region is SEQ ID NO: 135), 155 (when heavy chain CDR3 region is SEQ ID NO: 151), 171 (when heavy chain CDR3 region is SEQ ID NO: 167), or 187 (when heavy chain CDR3 region is SEQ ID NO: 183).

11. The substantially pure polypeptide of Claim 4 wherein said antibody includes a light chain region including the amino acid sequence of SEQ ID NO: 9 (when 15 heavy chain CDR3 region is SEQ ID NO: 7), 25 (when heavy chain CDR3 region is SEQ ID NO: 23), 41 (when heavy chain CDR3 region is SEQ ID NO: 39), 57 (when heavy chain CDR3 region is SEQ ID NO: 55), 73 (when heavy chain CDR3 region is SEQ ID NO: 71), 89 (when heavy chain CDR3 region is SEQ ID NO: 87), 105 (when heavy chain CDR3 region is SEQ ID NO: 103), 121 (when heavy chain CDR3 region is SEQ ID NO: 119), 137 20 (when heavy chain CDR3 region is SEQ ID NO: 135), 153 (when heavy chain CDR3 region is SEQ ID NO: 151), 169 (when heavy chain CDR3 region is SEQ ID NO: 167), or 185 (when heavy chain CDR3 region is SEQ ID NO: 183).

12. The substantially pure polypeptide of Claim 4 wherein said antibody includes a heavy chain Fd region including the CDR amino acid sequences of SEQ ID NO: 25 1 (when heavy chain CDR3 region is SEQ ID NO: 7), 17 (when heavy chain CDR3 region is SEQ ID NO: 23), 33 (when heavy chain CDR3 region is SEQ ID NO: 39), 49 (when heavy chain CDR3 region is SEQ ID NO: 55), 65 (when heavy chain CDR3 region is SEQ ID NO: 71), 81 (when heavy chain CDR3 region is SEQ ID NO: 87), 97 (when heavy chain CDR3 region is SEQ ID NO: 103), 113 (when heavy chain CDR3 region is SEQ ID NO: 119), 129 (when heavy chain CDR3 region is SEQ ID NO: 135), 145 (when heavy chain CDR3 region is SEQ ID NO: 151), 161 (when heavy chain CDR3 region is SEQ ID NO: 167), or 177 (when heavy chain CDR3 region is SEQ ID NO: 183).

13. The substantially pure polypeptide of Claim 12 wherein said antibody includes a light chain region including the CDR amino acid sequences of SEQ ID NO: 9 (when heavy chain CDR3 region is SEQ ID NO: 7), 25 (when heavy chain CDR3 region is SEQ ID NO: 23), 41 (when heavy chain CDR3 region is SEQ ID NO: 39), 57 (when heavy 5 chain CDR3 region is SEQ ID NO: 55), 73 (when heavy chain CDR3 region is SEQ ID NO: 71), 89 (when heavy chain CDR3 region is SEQ ID NO: 87), 105 (when heavy chain CDR3 region is SEQ ID NO: 103), 121 (when heavy chain CDR3 region is SEQ ID NO: 119), 137 (when heavy chain CDR3 region is SEQ ID NO: 135), 153 (when heavy chain CDR3 region is SEQ ID NO: 151), 169 (when heavy chain CDR3 region is SEQ ID NO: 10 167), or 185 (when heavy chain CDR3 region is SEQ ID NO: 183).

14. An isolated nucleic acid comprising a nucleotide sequence encoding a polypeptide selected from the group consisting of the polypeptide of Claim 1, the polypeptide of Claim 2, the polypeptide of Claim 3, the polypeptide of Claim 4, the polypeptide of Claim 5, the polypeptide of Claim 6, the polypeptide of Claim 7, the polypeptide of Claim 8, the polypeptide of Claim 9, the polypeptide of Claim 10, the polypeptide of Claim 11, the polypeptide of Claim 12, and the polypeptide of Claim 13.

15. An isolated nucleic acid as in Claim 14, wherein said nucleic acid comprises a vector including a regulatory sequence operably joined to said nucleic acid.

16. A host cell including a vector comprising a nucleic acid of Claim 14.

20 17. A pharmaceutical preparation comprising
a pharmaceutically acceptable carrier; and

a substantially pure polypeptide selected from the group consisting of the polypeptide of Claim 1, the polypeptide of Claim 2, the polypeptide of Claim 3, the polypeptide of Claim 4, the polypeptide of Claim 5, the polypeptide of Claim 6, the polypeptide of Claim 7, the polypeptide of Claim 8, the polypeptide of Claim 9, the polypeptide of Claim 10, the polypeptide of Claim 11, the polypeptide of Claim 12, 25 and the polypeptide of Claim 13.

18. A diagnostic preparation comprising
a pharmaceutically acceptable carrier; and

30 a substantially pure polypeptide selected from the group consisting of the polypeptide of Claim 1, the polypeptide of Claim 2, the polypeptide of Claim 3, the polypeptide of Claim 4, the polypeptide of Claim 5, the polypeptide of Claim 6, the polypeptide of Claim 7, the polypeptide of Claim 8, the polypeptide of Claim 9, the

polypeptide of Claim 10, the polypeptide of Claim 11, the polypeptide of Claim 12, and the polypeptide of Claim 13.

19. A method for the treatment of dengue virus disease comprising administering to a patient a therapeutically effective amount of the pharmaceutical preparation of Claim 17.

20. A method for prophylaxis against dengue virus disease comprising administering to a patient a prophylactically effective amount of the pharmaceutical preparation of Claim 17.

21. A method for the diagnosis of dengue virus disease comprising 10 administering to a patient an effective amount of the diagnostic preparation of Claim 18, and

detecting binding of the substantially pure polypeptide as a determination of the presence of dengue virus disease.

22. A method of detecting the presence of dengue virus in a biological sample 15 comprising

contacting said sample with the diagnostic preparation of Claim 18, and assaying binding of the substantially pure polypeptide as a determination of the presence of said dengue virus.

23. Humanized IgG1 5H2 plasmid deposited with ATCC as ATCC Accession 20 No. PTA-5662.

24. Humanized IgG1 1A5 plasmid deposited with ATCC as ATCC Accession No. PTA-6265.

25. pFab CMV-dhfr vector for expression of any full-length IgG1 deposited with ATCC as PTA-5662.